

REMARKS

Applicant respectfully requests reconsideration and allowance of claims 1, 3, and 5-14, which are pending in the above-identified application. Claims 1-8 stand rejected. Claims 10, 12, and 14 are allowed. Claims 9, 11, and 13 stand withdrawn. Applicant has amended claim 1 to include the subject matter of claims 2 and 4, and has canceled claims 2 and 4. Applicant has further amended claims 5-8, and 14, and the specification. No new matter is added by the amendments herein. In view of the following discussion, Applicant submits that all pending claims are in condition for allowance.

Specification Objection:

At page 2 of the Office Action, the Examiner objected to the disclosure for two informalities. Applicant has amended paragraphs [0022] and [0042] of the specification to recite “fluid” instead of “gas” and “delivers” instead of “delvers”, respectively, as suggested by the Examiner. Accordingly, Applicant respectfully requests that the objection to the specification be withdrawn.

Claim Objections:

At page 2 of the Office Action, the Examiner objected to claims 1-8 because of an informality regarding the recitation of “a surface” as referring to the same or a different surface. Applicant has amended independent claims 1, 7, and 8 to include the subject matter of claim 4, i.e., a mechanism or “a unit...to face a surface” and “an auxiliary cooling unit...to face a surface of the electronic device different from the surface that the primary cooling unit faces...” (Emphasis added.) Because amended claims 1, 7, and 8 recite that the mechanism and/or units face different surfaces, Applicant submits that the Examiner’s objection to claims 1-8 has been overcome, and respectfully requests that the Examiner’s claim objection be withdrawn.

Claim Rejections under 35 U.S.C. §112, second paragraph:

At page 2 of the Office Action, the Examiner rejected claim 1 and 7-8 under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant has amended claims 1 and 7-8 to no longer recite “close proximity”. As such, Applicant submits that amended claims 1, 7, and 8 are definite, and respectfully requests that the Examiner’s § 112, second paragraph, rejection be withdrawn.

Claim Rejections under 35 U.S.C. §102:

At page 3 of the Office Action, the Examiner rejected claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by Severson et al. (U.S. Pat. No. 5,474,120). Applicant respectfully traverses the Examiner's rejection.

Amended independent claim 1 recites "a primary cooling unit which is disposed so as to face a surface of an electronic device; [and] an auxiliary cooling unit which is disposed so as to face a surface of the electronic device different from the surface that the primary cooling unit faces;... wherein the primary cooling unit is based on a cooling mechanism different from that of the auxiliary cooling unit."

Applicant submits that Severson et al. does not disclose or suggest a primary cooling unit and an auxiliary cooling unit operating based on different cooling mechanisms and cooling an electronic device from different surfaces. Further, Severson et al. does not disclose or suggest that the two cooling units are independently controlled. From FIGS. 2-6 of Severson et al. (for example, airflows "I" and "J" in FIG. 5), the supply of cool air 51 and the cool air 69 of the Severson et al. system *both* face the same top surface of the electronics apparatus 62. Indeed, the cool air supply 51 and the cool air 69 do not face different surfaces of the electronics apparatus 62. Moreover, the cool air supply 51 and the cool air 69 are not based on different cooling mechanisms because both are based on air flow. In contrast, and by way of example, as disclosed in paragraph [0052] of the instant application, efficient cooling of the electronic device 200 suitable for the type of heat generated is achieved such that:

heat generated from the electronic device 200 on a constant basis is removed by air cooling using the heat sink 252 and the electric fan. Meanwhile, heat generated from the electronic device 200 temporarily or instantaneously is removed by jet cooling. The electronic device cooling apparatus 100 according to the embodiment is capable of promptly responding to variation in the amount of heat generated from the electronic device 200, by driving a jet cooling mechanism as an auxiliary means.

Indeed, the primary and auxiliary cooling units of the present invention operate based on different cooling mechanisms. Moreover, from FIG. 1 of the instant application, heat sink 252 and the electric fan of the present invention face the top surface of electronic device 200 while jet cooling apparatus 300 faces the bottom surface of the electronic device 200, i.e., the units face different surfaces. As such, Applicant submits that Severson et al. does not disclose or suggest each and every element of amended independent claim 1, and that amended independent claim 1 is, therefore, patentable. As claim 3 depends from independent claim 1, and recites additional

patentable features, claim 3 is, therefore, likewise patentable.

At page 4 of the Office Action, the Examiner rejected claims 1 and 4 under 35 U.S.C. § 102(b) as being anticipated by Kondou et al. (U.S. Pat. No. 5,361,188). Applicant respectfully traverses the Examiner's rejection.

Applicant submits that Kondou et al. does not disclose or suggest a primary cooling unit and an auxiliary cooling unit operating based on different cooling mechanisms as recited in independent claim 1. Kondou et al. does not disclose or suggest two cooling units, a primary cooling unit and an auxiliary cooling unit, that operate based on different cooling mechanisms and cool an electronic device from different surfaces, where the two cooling units are independently controlled. From FIG. 1 of Kondou et al., the fan 13 and the fan 3 are *both* based on the same cooling mechanism, e.g., air flow. In contrast, as aforementioned, the primary and auxiliary cooling units of the present invention are based on different cooling mechanisms. As such, Applicant submits that Kondou et al. does not disclose or suggest each and every element of amended independent claim 1, and that amended independent claim 1 is, therefore, patentable.

At page 4 of the Office Action, the Examiner rejected claims 1 and 5 under 35 U.S.C. § 102(e) as being anticipated by Beitelmal et al. (U.S. Pat. No. 6,904,968). Applicant respectfully traverses the Examiner's rejection.

Applicant submits that Beitelmal et al. does not disclose or suggest a primary cooling unit and an auxiliary cooling unit operating based on different cooling mechanisms as recited in independent claim 1. Beitelmal et al. does not disclose or suggest a primary cooling unit and an auxiliary cooling unit that operate based on different cooling mechanisms and cool an electronic device from different surfaces, where the two cooling units are independently controlled. From FIG. 2 of Beitelmal et al., the blower 14 (top left) and the blower 14 (top right) are *both* based on the same cooling mechanism, e.g., air flow. In contrast, as aforementioned, the primary and auxiliary cooling units of the present invention are based on different cooling mechanisms. As such, Applicant submits that Beitelmal et al. does not disclose or suggest each and every element of amended independent claim 1, and that amended independent claim 1 is, therefore, patentable. As claim 5 depends from amended independent claim 1, and recites additional patentable features, claim 5 is, therefore, likewise patentable.

Accordingly, Applicant respectfully requests that the Examiner's §102 rejections be withdrawn.

Allowable Subject Matter:

Applicant respectfully acknowledges that the Examiner has allowed claims 10, 12, and 14 at page 7 of the Office Action.

At page 7 of the Office Action, the Examiner stated that claim 6 would be allowable if rewritten to overcome the §112, second paragraph, rejection and to include all of the limitations of the base claim and any intervening claims. As the patentability of amended independent claim 1, from which claim 6 depends, was discussed above, Applicant submits that claim 6 is likewise patentable.

At page 7 of the Office Action, the Examiner stated that claims 7 and 8 would be allowable if rewritten to overcome the §112, second paragraph, rejection. Applicant has amended claims 7 and 8 to overcome the §112, second paragraph, rejection. As such, Applicant submits that claims 7 and 8 are, therefore, patentable, and requests that the Examiner allow claims 7 and 8.

Conclusion:

In view of the foregoing, Applicant submits that the instant claims are in condition for allowance. Early and favorable action is earnestly solicited. The fee for the petition is included herewith. In the event there are any further fees due and owing in connection with this matter, please charge same to our Deposit Account No. 11-0223.

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Respectfully submitted,

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